Parallel arrays into one MPPT – Sungrow Inverters

Disclaimer

The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

Different orientation PV arrays connected to the same MPPT

Applicability: All current (at time of publication) Sungrow inverters where there is more than one input into an MPPT.

The following statement from Sungrow is in relation to parallel PV arrays with different azimuth and/or tilt angles being connected in parallel to the same MPPT.

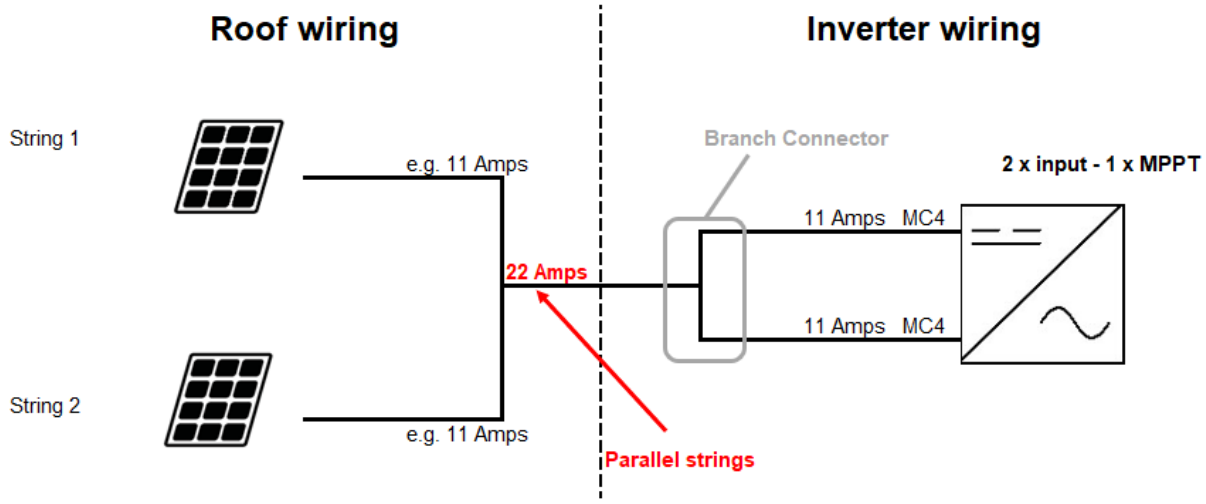
Sungrow declaration:

Sungrow Australia will recognise that designers / Installers may connect two different orientation PV arrays into one MPPT where necessary, providing:

- Both arrays and strings are electrically identical.
- The arrays and wiring conform to the most recent AS/NZS5033 standard.
- An accredited CEC/SAA designer has signed off on the design.
- A CEC/SAA accredited Installer installs and commissions the system in accordance with the current applicable standards and guidelines.
- The open circuit voltage and short circuit total currents do not exceed the max ratings for the inverter string input and MPPT that is stated on the official and current data sheet for each model.
- The Isc does not exceed the max current rating of the input or MC4 connector.
- Two different arrays should only be connected where an MPPT has two or more inputs, using both inputs (see diagram below). (Some inverters have one MPPT

with one input, and one MPPT with two inputs. Only parallel the arrays where the MPPT has two inputs. Do not parallel into one input.)

- If both strings are parallel into one cable from roof to inverter, you ***MUST*** use a branch connector at the inverter end to split back into two.
- ***Enable the parallel mode in the settings*.***
- The retailer and designer accept that max efficiency specified on the data sheet may no longer be applicable and advise the End User in writing.
- That the above is specified on all relevant certificates of compliance including STC's forms.
- That all parties accept that Sungrow does not guarantee peak performance in the above configuration.



Picture 1 – Using branch connector

*Parallel mode:

Please refer to the document explaining how to enable 'Parallel mode' here.

If the issue persists after following above procedures, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au, Monday- Friday 9am - 5pm (AEDT).